That which is claimed is:

1. A method for improving flux compatibility of an underfill formulation in the presence of flux, flux residues and/or reaction products thereof, said method comprising adding an effective amount of one or more cationic catalyst(s) to said underfill formulation.

2. The method of claim 1 wherein the underfill formulation comprises one or more curable resins and the one or more cationic catalyst(s).

3. The method of claim 2 wherein the underfill formulation further comprises filler.

4. The method of claim 3 wherein the underfill formulation further comprises coreshell rubber.

5. The method of claim 4 wherein the underfill formulation further comprises surfactant.

6. The method of claim 5 wherein the underfill formulation further comprises silane.

7. The method of claim 2 wherein the underfill formulation further comprises coreshell rubber.

8. The method of claim 2 wherein the underfill formulation further comprises surfactant.

9. The method of claim 2 wherein the underfill formulation further comprises silane.

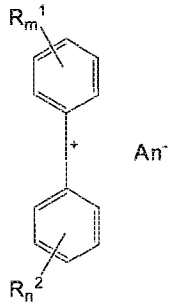
10. The method of claim 2 wherein the underfill formulation further comprises at least one curing agent.

11. The method of claim 1 wherein the cationic catalyst is an onium salt.

12. The method of claim 1 wherein the cationic catalyst is selected from the group consisting of a diaryliodonium salt, a triarylsulfonium salt, a diaryliodosonium salt, a triarylsulfoxonium salt, a dialkylphenacyl-sulfonium salt, a dialkyl(hydroxy dialkylphenyl)sulfonium salt, a phosphonium salt, a ferrocenium salt, and combinations of any two or more thereof.

13. The method of claim 1 wherein the cationic catalyst is a diaryliodonium salt or a triarylsulfonium salt.

14. The method of claim 1 wherein the cationic catalyst is a diaryliodonium salt having the formula:



wherein:

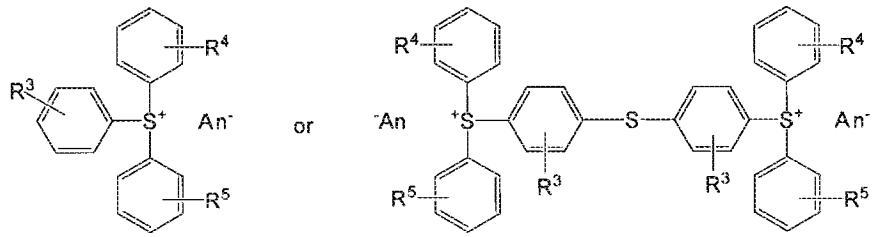
R^1 and R^2 are each independently selected from the group consisting of alkyl, alkoxy and halogen;

m and n are each independently 0-2; and

An^- is an anion.

15. The method of claim 14 wherein An^- is selected from the group consisting of hexafluoroarsenate (AsF_6), hexafluoroantimonate (SbF_6), hexafluorophosphate (PF_6), boron tetrafluoride (BF_4), trifluoromethane sulfonate (CF_3SO_3), tetrakis(pentafluorophenylborate), ($B[C_6F_5]_4$), tetrakis [3,5-bis(trifluoro-methyl)phenyl]borate ($B[C_6H_3(CF_3)_2]_4$), and combinations of any two or more thereof.

16. The method of claim 1 wherein the cationic catalyst is a triarylsulfonium salt having the formulae:



wherein:

R^3, R^4 and R^5 are each optionally present and are independently selected from the group consisting of alkyl, alkoxy, phenoxy, and phenylsulfide; and

An^- is an anion.

17. The method of claim 16 wherein An^- is selected from the group consisting of hexafluoroarsenate (AsF_6), hexafluoroantimonate (SbF_6), hexafluorophosphate (PF_6), boron tetrafluoride (BF_4), trifluoromethane sulfonate (CF_3SO_3), tetrakis(pentafluorophenylborate), ($B[C_6F_5]_4$), tetrakis [3,5-bis(trifluoro-methyl)phenyl]borate ($B[C_6H_3(CF_3)_2]_4$), and combinations of any two or more thereof.

18. The method of claim 1 wherein the cationic catalyst is selected from the group consisting of (4-octyloxy-phenyl)phenyliodonium hexafluoroantimonate, [4-(2-hydroxy-1-tetradecyloxy)phenyl]phenyliodonium hexafluoroantimonate, 4-(2-hydroxy-tetradecyloxyphenyl)phenyliodonium hexafluoroantimonate, and combinations of any two or more thereof.

19. The method of claim 18 wherein the cationic catalyst is 0.1-10 wt % of said underfill formulation.

20. The method of claim 1 wherein the cationic catalyst(s) is added to said underfill formulation at elevated temperatures.

21. The method of claim 20 wherein the elevated temperatures are from about 30°C to about 150°C.

22. The method of claim 1 wherein the curable resin is selected from the group consisting of epoxy resins, phenol resins, maleimide resins, itaconamide resins, nadimide resins, (meth)acrylate resins, polyamide resins, polyimide resins, cyanate ester resins, and combinations of any two or more thereof.

23. The method of claim 7 wherein the coreshell rubber is selected from the group consisiting of butadiene-acrylonitrile-styrene coreshell rubber (ABS), methyl methacrylate-butadiene-styrene coreshell rubber (MBS), methyl methacrylate-butyl acrylate-styrene coreshell rubber (MAS), octyl acrylate-butadiene-styrene coreshell rubber (MABS), alkyl acrylate-butadiene-acrylonitrile-styrene coreshell rubber (AABS), butadiene-styrene coreshell rubber (SBR), methyl methacrylate-butyl acrylate-siloxane coreshell rubber, and combinations of any two or more thereof.

24. The method of claim 8 wherein the surfactant is selected from the group consisting of an acrylic polymer, a silicone, a polyoxyethylene/polyoxypropylene block copolymer, an ethylene diamine based polyoxyethylene/polyoxypropylene block copolymer, a polyol-based polyoxyalkylene, a fatty alcohol-based polyoxyalkylene, a fatty alcohol polyoxyalkylene alkyl ether, and combinations of any two or more thereof.

25. The method of claim 9 wherein the silane is selected from the group consisting of glycidoxypropyl trimethoxy-silane, γ-amino propyl triethoxysilane, trimethoxysilyl propylated isocyanurate, and combinations of any two or more thereof.

26. The method of claim 6 wherein the underfill formulation comprises:

bis-phenol F epoxy resin	20 to 60%;
a cycloaliphatic epoxy resin	5 to 60%;
silica filler	0 to 75%;
coreshell rubber in bis-phenol F epoxy resin	0 to 20%;
a surfactant	0 to 1%;
a silane	0.1 to 3%;
a cationic catalyst	1 to 3%; and
a copper co-catalyst	0.05 to 1%.

27. The method of claim 26 wherein the underfill formulation comprises:

bis-phenol F epoxy resin	27.8%;
a cycloaliphatic epoxy resin	12.5%;
silica filler	50.0%;
coreshell rubber in bis-phenol F epoxy resin	7.5%;
a surfactant	0.1%;
a silane	0.5%;
a cationic catalyst	1.5%; and
a copper co-catalyst	0.1%.

28. In a method for improving flux compatibility of underfill formulations in the presence of flux, flux residues and/or reaction products thereof, the improvement comprising adding an effective amount of one or more cationic catalyst(s) to the underfill formulation.

29. A method for improving HAST performance of an underfill formulation in the presence of flux, flux residues and/or reaction products thereof, the method comprising adding an amount of one or more cationic catalyst(s) to the underfill formulation effective to improve the HAST performance thereof.

30. A method for preparing an underfill formulation having improved flux compatibility in the presence of flux, flux residues and/or reaction products thereof, the method comprising adding an amount of one or more cationic catalyst(s) to the underfill formulation effective to improve the flux compatibility thereof.

31. A method for encapsulating an electronic component in the presence of flux, flux residues and/or reaction products thereof, the method comprising:

applying a composition comprising one or more curable resins and one or more cationic catalyst(s) to the component, and

curing the composition.

32. A method for encapsulating an electronic component in the presence of flux, flux residues and/or reaction products thereof, the method comprising curing a composition comprising one or more curable resins and one or more cationic catalyst(s) after application of the composition to the component.

33. A method for adhesively attaching an electronic component to a circuit board in the presence of flux, flux residues and/or reaction products thereof, the method comprising:

applying a composition comprising one or more curable resins and one or more cationic catalyst(s) between the component and the board, and

curing the composition.

34. A method for adhesively attaching an electronic component to a circuit board in the presence of flux, flux residues and/or reaction products thereof, the method comprising curing a composition comprising one or more curable resins and one or more cationic catalyst(s) after application of the composition between the component and the board.

35. An article comprising an electronic component, encapsulated in the presence of flux, flux residues and/or reaction products thereof, with a cured aliquot of a composition comprising one or more curable resins and one or more cationic catalyst(s).

36. An article comprising an electronic component adhesively attached to a circuit board in the presence of flux, flux residues and/or reaction products thereof, wherein the electronic component is adhesively attached to the board by a cured aliquot of a composition comprising one or more curable resins and one or more cationic catalyst(s).